

AMENDMENTS TO THE CLAIMS

1. (Cancelled).

2. (Cancelled).

3. (Currently Amended) A mobile communication system for forming a high speed data transfer path for a mobile station and performing resource management on the high speed data transfer path, the mobile communication system comprising:

means which measures a time rate at which data is sent on the data transfer path; and

means which performs the resource management on the basis of a result of the measurement, ~~by presuming the use rate of the resource by measurement of a time rate that is identical with the time rate of transmission of data on a shared channel~~ the resource management being performed on the basis of the time rate at which data was sent on the data transfer path.

4. (Previously Presented) A mobile communication system for performing resource management including allocation of codes and transmission power control to form a high speed data transfer path for a mobile station, the mobile communication system comprising:

calculation means which calculates average values with respect to the number of use of the codes and an amount of use of the transmission power on the basis of a data transfer time to the data transfer path, the number of use of codes being measured during the data transfer time; and

control means which performs the resource management on the basis of the average values.

5. (Withdrawn) The mobile communication system according to claim 4,

wherein the data transfer time is a transmission time at the time when a data transfer amount, which is sent when an available transfer data amount to be found from the number of allocation of codes, the transmission power, and channel quality information, becomes substantially the maximum, becomes substantially the same as the available transfer data amount.

6. (Withdrawn) The mobile communication system according to claim 4,

wherein the data transfer time is a transmission time at the time when the transmission power is in the vicinity of transmission power amount which is set for the data transfer path in advance.

7. (Original) The mobile communication system according to claim 4,

wherein said calculation means calculates an average number of use or an average rate of use of the codes.

8. (Previously Presented) The mobile communication system according to claim 4,

wherein said calculation means calculates whether a ratio of used codes becomes equal to or higher than a threshold value set in advance or calculates a time at which the number of used codes become equal to or higher than the threshold value.

9. (Withdrawn) The mobile communication system according to claim 4,

wherein said calculation means calculates a ratio of the number of codes at the time when whole allocated transmission power is used becoming equal to or higher than a threshold value set in advance or a time in which the number of codes becomes equal to or higher than the threshold value.

10. (Original) The mobile communication system according to claim 4,

wherein said calculation means calculates an average use amount or an average use rate of the transmission power.

11. (Withdrawn) The mobile communication system according to claim 4,

wherein said calculation means calculates a ratio of the transmission power becoming equal to or higher than a threshold value set in advance or a time in which the transmission power becomes equal to or higher than the threshold value.

12. (Withdrawn) The mobile communication system according to claim 4,

wherein said calculation means calculates a ratio of transmission power amount at the time when all allocated codes are used becoming equal to or higher than a threshold value set in advance or a time in which the transmission power amount becomes equal to or higher than the threshold value.

13. (Original) The mobile communication system according to claim 4,

wherein said calculation means calculates the data transfer time or a ratio thereof in a measurement period set in advance.

14. (Previously Presented) The mobile communication system according to claim 4,

wherein said calculation means calculates a data transfer time in which the number of codes or the transmission power becomes equal to or higher than a threshold value set in advance in a measurement period set in advance.

15. (Original) The mobile communication system according to claim 4,

wherein said calculation means integrates use rates of the codes and the transmission power in a measurement period set in advance to calculate a use time rate of resources.

16. (Previously Presented) A mobile communication system, comprising:

a base station;

a mobile station for which a shared channel shared with other mobile stations is set in order to perform data transmission with said base station; and

a radio network controller which notifies said base station of at least the number of allocated codes which is a maximum value of the number of codes of said shared channel,

wherein means is included in said base station, which calculates an average number of use of the codes in a data transmission time on said shared channel, the number of use of codes being measured during the data transmission time.

17. (Previously Presented) A mobile communication system, comprising:

a base station;

a mobile station for which a shared channel shared with other mobile stations is set in order to perform data transmission with said base station; and

a radio network controller which notifies said base station of at least allocated power which is a maximum value of power of said shared channel,

wherein means is included in said base station, which calculates an average amount of use of the power in a data transmission time on said shared channel based on power measurement performed during the data transmission time.

18. (Currently Amended) A mobile communication system, comprising:

a base station;

a mobile station for which a shared channel shared with other mobile stations is set in order to perform data transmission with said base station; and

a radio network controller which notifies said base station of at least resource allocation information of said shared channel,

wherein means is included in said base station, which measures a time rate at which data is sent on said shared channel, and wherein resource management is performed ~~by presuming the use rate of the resource by measurement of a time rate that is identical with the time rate of transmission of data on a shared channel~~ on the basis of a time rate in which data was transmitted on said shared channel.

19. (Previously Presented) A mobile communication system, comprising:

a base station;

a mobile station for which a shared channel shared with other mobile stations is set in order to perform data transmission with said base station; and

a radio network controller which notifies said base station of the number of allocated codes which is a maximum value of the number of codes of said shared channel and allocated power which is a maximum value of power of said shared channel,

wherein said base station includes:

means, which calculates an average number of use of the codes in a data transmission time on said shared channel based on measurement of the number of use of the codes during the data transmission time,

means, which calculates an average amount of use of the power in a data transmission time on said shared channel based on measurement of the use of the power during the data transmission time, and

means, which calculates a time rate at which data is sent on said shared channel, are included in said base station.

20. (Withdrawn) The mobile communication system according to claim 19,

wherein the average number of use of the codes, the average value of use of the power, and the time rate at which data is sent are measured on the basis of a transmission time at the time when a data transfer amount, which is sent when an available transfer data amount to be found from the number of allocation of codes, the transmission power, and channel quality information,

becomes substantially the maximum, becomes substantially the same as the available transfer data amount.

21. (Withdrawn) The mobile communication system according to claim 19,

wherein the average number of use of the codes, the average value of use of the power, and the time rate at which data is sent are measured on the basis of a transmission time at the time when the transmission power is in the vicinity of transmission power amount which is set for the data transfer path in advance.

22. (Withdrawn) The mobile communication system according to claim 19,

wherein means, which informs said radio network controller of the average number of use of the codes and the average value of use of the power, is included in said base station, and

means, which updates the number of allocated codes and the allocated power on the basis of the informed average number of use of the codes and average value of use of the power, is included in said radio network controller.

23. (Withdrawn) The mobile communication system according to claim 22,

wherein means, which informs said radio network controller of the time rate at which data is sent, is included in said base station, and

means, which updates the number of allocated codes and the allocated power on the basis of the reported time rate at which data is sent, is included in said radio network controller.

24. (Withdrawn) The mobile communication system according to claim 19,

wherein means, which calculates the number of allocated codes and allocated power to be requested of said radio network controller according to the average number of use of the codes and the average value of use of the power, and means, which notifies said radio network controller of the number of allocated codes and the allocated power to be requested, are included in said base station, and

means, which updates the number of allocated codes and the allocated power in response to the number of allocated codes and the allocated power to be requested, is included in said radio network controller.

25. (Withdrawn) The mobile communication system according to claim 24,

wherein means, which calculates the number of allocated codes and allocated power to be requested of said radio network controller according to the time rate at which data is sent, is included in said base station.

26. (Withdrawn) The mobile communication system according to claim 19,

wherein means, which updates the number of allocated codes and the allocated power on the basis of the average number of use of the codes and the average value of use of the power, is included in said base station.

27. (Withdrawn) The mobile communication system according to claim 26,

wherein means, which updates the number of allocated codes and the allocated power on the basis of the time rate at which data is sent, is included in said base station.

Claims 28-31 (Cancelled).

32. (Currently Amended) A base station which sets a shared channel shared with other mobile stations in order to perform data transmission with a mobile station at least on the basis of the number of allocated codes which is notified from a radio network controller and is a maximum value of the number of codes of said shared channel, the base station comprising:

one or more antennas; and

means which calculates an average number of use of the codes in a data transmission time on said shared channel, the number of use of codes being measured during the data transmission time.

33. (Currently Amended) A base station which sets a shared channel shared with other mobile stations in order to perform data transmission with a mobile station at least on the basis of allocated power which is notified from a radio network controller and is a maximum value of power of said shared channel, the base station comprising:

one or more antennas; and

means which calculates an average amount of use of the power in a data transmission time on said shared channel based on power measurement performed during the data transmission time.

34. (Currently Amended) A base station which sets a shared channel shared with other mobile stations in order to perform data transmission with a mobile station at least on the basis of

resource allocation information which is notified from a radio network controller, the base station comprising:

one or more antennas; and

means which measures a time rate at which data is sent on said shared channel,

wherein resource management is performed ~~by presuming the use rate of the resource by measurement of a time rate that is identical with the time rate of transmission of data on a shared channel~~ on the basis of the time rate at which data was sent on said shared channel.

35. (Previously Presented) A base station which sets a shared channel shared with other mobile stations in order to perform data transmission with a mobile station on the basis of the number of allocated codes which is notified from a radio network controller and is a maximum value of the number of codes of said shared channel and allocated power which is a maximum value of power of said shared channel, the base station comprising:

means which calculates an average number of use of the codes in a data transmission time on said shared channel based on measurement of the number of use of the codes during the data transmission time;

means which calculates an average value of use of the power in a data transmission time on said shared channel based on measurement of the use of the power during the data transmission time; and

means which calculates a time rate at which data is sent on said shared channel.

36. (Withdrawn) The base station according to claim 35,

wherein the average number of use of the codes, the average value of use of the power, and the time rate at which data is sent are measured on the basis of a transmission time at the time when a data transfer amount, which is sent when an available transfer data amount to be found from the number of allocation of codes, the transmission power, and channel quality information, becomes substantially the maximum, becomes substantially the same as the available transfer data amount.

37. (Withdrawn) The base station according to claim 35,

wherein the average number of use of the codes, the average value of use of the power, and the time rate at which data is sent are measured on the basis of a transmission time at the time when the transmission power is in the vicinity of transmission power amount which is set for the data transfer path in advance.

38. (Withdrawn) The base station according to claim 35, further comprising

means which informs said radio network controller of the average number of use of the codes and the average value of use of the power to cause said radio network controller to update the number of allocated codes and the allocated power.

39. (Withdrawn) The base station according to claim 38,

wherein means which informs said radio network controller of the time rate at which data is sent and causes said radio network controller to update the number of allocated codes and the allocated power is included in said base station.

40. (Withdrawn) The base station according to claim 35, further comprising:

means which calculates the number of allocated codes and allocated power to be requested of said radio network controller according to the average number of use of the codes and the average value of use of the power; and

means which notifies said radio network controller of the number of allocated codes and the allocated power to be requested and causes said radio network controller to update the number of allocated codes and the allocated power.

41. (Withdrawn) The base station according to claim 40, further comprising:

means which calculates the number of allocated codes and allocated power to be requested of said radio network controller according to the time rate at which data is sent.

42. (Withdrawn) The base station according to claim 35, further comprising:

means which updates the number of allocated codes and the allocated power on the basis of the average number of use of the codes and the average value of use of the power.

43. (Withdrawn) The base station according to claim 42, further comprising:

means which updates the number of allocated codes and the allocated power on the basis of the time rate at which data is sent.

44. (Withdrawn) A radio network controller which, when a shared channel shared with other mobile stations is set in order to perform data transmission between a base station and a

mobile station, notifies said base station of at least the number of allocated codes which is a maximum value of the number of codes of said shared channel, the radio network controller comprising:

means which updates the number of allocated code on the basis of the average number of use of the codes in a data transmission time on said shared channel which is measured in said base station.

45. (Withdrawn) A radio network controller which, when a shared channel shared with other mobile stations is set in order to perform data transmission between a base station and a mobile station, notifies said base station of at least allocated power which is a maximum value of power of said shared channel, the radio network controller comprising:

means which updates the allocated power on the basis of the average value of use of the power in a data transmission time on said shared channel which is measured in said base station.

46. (Withdrawn) A radio network controller which, when a shared channel shared with other mobile stations is set in order to perform data transmission between a base station and a mobile station, notifies said base station of at least resource allocation information of said shared channel, the radio network controller comprising:

means which updates the resource allocation information on the basis of a time rate at which data is sent on said shared channel which is measured in said base station.

47. (Withdrawn) A radio network controller which, when a shared channel shared with other mobile stations is set in order to perform data transmission between a base station and a mobile station, notifies said base station of the number of allocated codes which is a maximum

value of the number of codes of said shared channel and allocated power which is a maximum value of power of said shared channel, the radio network controller comprising:

means which updates the number of allocated codes and the allocated power on the basis of the average number of use of the codes in a data transmission time on said shared channel which is measured in said base station, an average value of use of the power in a data transmission time on said shared channel, and a time rate at which data is sent on said shared channel.

48. (Withdrawn) The radio network controller according to claim 47,

wherein the average number of use of the codes, the average value of use of the power, and the time rate at which data is sent are measured on the basis of a transmission time at the time when a data transfer amount, which is sent when an available transfer data amount to be found from the number of allocation of codes, the transmission power, and channel quality information, becomes substantially the maximum, becomes substantially the same as the available transfer data amount.

49. (Withdrawn) The radio network controller according to claim 47,

wherein the average number of use of the codes, the average value of use of the power, and the time rate at which data is sent are measured on the basis of a transmission time at the time when the transmission power is in the vicinity of transmission power amount which is set for the data transfer path in advance.

50. (Withdrawn) The radio network controller according to claim 47, further comprising:

means which updates the number of allocated codes and the allocated power in response to the number of allocated codes and allocated power which are notified from said base station and requested according to the average number of use of the codes and the average value of use of the power.

51. (Withdrawn) The radio network controller according to claim 50, further comprising:

means which updates the number of allocated codes and the allocated power in response to the number of allocated codes and allocated power which are notified from said base station and requested according to the time rate at which data is sent.

Claims 52-53. (Cancelled).

54. (Currently Amended) A resource allocation control method for a mobile communication system which forms a high speed data transfer path for a mobile station and performs resource management in the high speed data transfer path, the resource allocation control method comprising, on a management side performing the resource management:

processing for measuring a time rate at which data is sent on the data transfer path;
and

processing for performing the resource management on the basis of a result of the measurement, wherein resource management is performed ~~by presuming the use rate of the resource by measurement of a time rate that is identical with the time rate of transmission of data on a shared channel~~ on the basis of the time rate at which data was sent on the data transfer path.

55. (Previously Presented) A resource allocation control method for a mobile communication system which performs resource management including allocation of codes and transmission power control to form a high speed data transfer path for a mobile station, the resource allocation control method comprising, on a management side performing the resource management:

processing for calculating average values with respect to the number of use of the codes and an amount of use of the transmission power on the basis of a data transfer time to the data transfer path, the number of use of the codes being measured during the data transfer time; and

processing for performing the resource management on the basis of the average values.

56. (Withdrawn) The resource allocation control method according to claim 55,

wherein the data transfer time is a transmission time at the time when a data transfer amount, which is sent when an available transfer data amount to be found from the number of allocation of codes, the transmission power, and channel quality information, becomes substantially the maximum, becomes substantially the same as the available transfer data amount.

57. (Withdrawn) The resource allocation control method according to claim 55,

wherein the data transfer time is a transmission time at the time when the transmission power is in the vicinity of transmission power amount which is set for the data transfer path in advance.

58. (Original) The resource allocation control method according to claim 55,

wherein said processing for calculating average values calculates an average number of use or an average rate of use of the codes.

59. (Previously Presented) The resource allocation control method according to claim 55,

wherein said processing for calculating average values calculates whether a ratio of used codes becomes equal to or higher than a threshold value set in advance or calculates a time at which the number of used codes become equal to or higher than the threshold value.

60. (Withdrawn) The resource allocation control method according to claim 55,

wherein said processing for calculating average values calculates a ratio of the number of codes at the time when whole allocated transmission power is used becoming equal to or higher than a threshold value set in advance or a time in which the number of codes becomes equal to or higher than the threshold value.

61. (Original) The resource allocation control method according to claim 55,

wherein said processing for calculating average values calculates an average use amount or an average use rate of the transmission power.

62. (Withdrawn) The resource allocation control method according to claim 55,

wherein said processing for calculating average values calculates a ratio of the transmission power becoming equal to or higher than a threshold value set in advance or a time in which the transmission power becomes equal to or higher than the threshold value.

63. (Withdrawn) The resource allocation control method according to claim 55,

wherein said processing for calculating average values calculates a ratio of transmission power amount at the time when all allocated codes are used becoming equal to or higher than a threshold value set in advance or a time in which the transmission power amount becomes equal to or higher than the threshold value.

64. (Original) The resource allocation control method according to claim 55,

wherein said processing for calculating average values calculates the data transfer time or a ratio thereof in a measurement period set in advance.

65. (Previously Presented) The resource allocation control method according to claim 55,

wherein said processing for calculating average values calculates a data transfer time in which the number of used codes or the transmission power becomes equal to or higher than a threshold value set in advance in a measurement period set in advance.

66. (Original) The resource allocation control method according to claim 55,

wherein said processing for calculating average values integrates use rates of the codes and the transmission power in a measurement period set in advance to calculate a use time rate of resources.

Claims 67-70. (Cancelled).

71. (Previously Presented) A resource allocation control method for a mobile communication system which comprises: a base station; a mobile station for which a shared channel shared with other mobile stations is set in order to perform data transmission with the base station; and a radio network controller which notifies the base station of at least the number of allocated codes which is a maximum value of the number of codes of said shared channel, the resource allocation control methods comprising, on said base station side, the step of:

calculating an average number of use of the codes in a data transmission time on said shared channel, the number of use of the codes being measured during the data transmission time.

72. (Previously Presented) A resource allocation control method for a mobile communication system which comprises: a base station; a mobile station for which a shared channel shared with other mobile stations is set in order to perform data transmission with the base station; and a radio network controller which notifies the base station of at least allocated power which is a maximum value of power of said shared channel, the resource allocation control methods comprising, on said base station side, the step of:

calculating an average value of use of the power in a data transmission time on said shared channel based on power measurement performed during the data transmission time.

73. (Currently Amended) A resource allocation control method for a mobile communication system which comprises: a base station; a mobile station for which a shared channel shared with other mobile stations is set in order to perform data transmission with the base station; and a radio network controller which notifies the base station of at least resource allocation information of said shared channel, the resource allocation control method comprising, on said base station side, the step of:

measuring a time rate at which data is sent on said shared channel, wherein resource management is performed ~~by presuming the use rate of the resource by measurement of a time rate that is identical with the time rate of transmission of data on a shared channel~~ on the basis of the time rate at which data was sent on said shared channel.

74. (Previously Presented) A resource allocation control method for a mobile communication system which comprises: a base station; a mobile station for which a shared channel shared with other mobile stations is set in order to perform data transmission with the base station; and a radio network controller which notifies the base station of the number of allocated codes which is a maximum value of the number of codes of said shared channel and allocated power which is a maximum value of power of said shared channel, the resource allocation control method comprising: on said base station side, steps of:

calculating an average number of use of the codes in a data transmission time on said shared channel based on measurement of the number of use of the codes during the data transmission time;

calculating an average amount of use of the power in a data transmission time on said shared channel based on measurement of the use of the power during the data transmission time; and

calculating a time rate at which data is sent on said shared channel.

75. (Withdrawn) The resource allocation control method according to claim 74,

wherein the average number of use of the codes, the average value of use of the power, and the time rate at which data is sent are measured on the basis of a transmission time at the time when a data transfer amount, which is sent when an available transfer data amount to be found from the number of allocation of codes, the transmission power, and channel quality information, becomes substantially the maximum, becomes substantially the same as the available transfer data amount.

76. (Withdrawn) The resource allocation control method according to claim 74,

wherein the average number of use of the codes, the average value of use of the power, and the time rate at which data is sent are measured on the basis of a transmission time at the time when the transmission power is in the vicinity of transmission power amount which is set for the data transfer path in advance.

77. (Withdrawn) The resource allocation control method according to claim 74, further comprising, on said base station side, the step of:

informing said radio network controller of the average number of use of the codes and the average value of use of the power,

wherein said radio network controller updates the number of allocated codes and the allocated power on the basis of the informed average number of use of the codes and average value of use of the power.

78. (Withdrawn) The resource allocation control method according to claim 77, further comprising, in said base station, the step of:

informing said radio network controller of the time rate at which data is sent,

wherein said radio network controller updates the number of allocated codes and the allocated power on the basis of the informed time rate at which data is sent.

79. (Withdrawn) The resource allocation control method according to claim 74, further comprising, on said base station side, the steps of:

calculating the number of allocated codes and allocated power to be requested of said radio network controller according to the average number of use of the codes and the average value of use of the power; and

informing said radio network controller of the number of allocated codes and the allocated power to be requested,

wherein said radio network controller updates the number of allocated codes and the allocated power in response to the number of allocated codes and the allocated power to be requested.

80. (Withdrawn) The resource allocation control method according to claim 79, further comprising, on said base station, the step of:

calculating the number of allocated codes and allocated power to be requested of said radio network controller according to the time rate at which data is sent.

81. (Withdrawn) The resource allocation control method according to claim 74, further comprising, on said base station side, the step of:

updating the number of allocated codes and the allocated power on the basis of the average number of use of the codes and the average value of use of the power.

82. (Withdrawn) The resource allocation control method according to claim 81, further comprising, in said base station, the step of:

updating the number of allocated codes and the allocated power on the basis of the time rate at which data is sent.